ERIC Document Resume	See Instruction Sheet	DATE OF RESUME	DATE RECEIVED

A. PUBLICATION DATA

1. ERIC NUMBER	2. ORIGINATOR CONTROL NO(S).	3. IDENTIFICATION NO.
ED002720	N.A.	598

DO NOT WRITE IN SPACE BELOW

4. AUTHOR(S): Adkins, Gale R.

5. TITLE OF DOCUMENT ABSTRACTED:
A Study of Certain Factors that Influence the Use of Radio Broadcasts and Recordings in Public School Classrooms

6. PUBLICATION TITLE: N.A.

7. EDITOR(S): N.A.

9. PUBLISHER OR SOURCE: Radio-Television Research, The University of Kansas, Lawrence, Kansas

8. PLACE OF ORIGIN: ORG. Radio-Television Research, The; ST. University of Kansas; CITY, STATE Lawrence, Kansas; TELE. EXT.; INST/LOC CODE

10. VOL.	11. PAGES	12. MO./YR.	13. TOTAL PP.
N.A.	N.A.	1959	35

MICROFILM COPY AVAILABLE: YES ☒ NO ☐

COPYRIGHT GRANTED: YES ☐ NO ☒

COPYRIGHT RELEASE FILED: YES ☐ NO ☐

TYPE OF REPORT: PROPOSAL ☐ IN-PROGRESS ☐ FINAL ☒ FOLLOW-UP ☐

OTHER ERIC REFERENCES:

ERIC SATELLITE CODE

B. INDEXING DATA

14. SUBJECT AREA

15. TYPE OF ENDEAVOR: Report

16. INDEXING TERMS (6-12)				
elementary education				
surveys	faculty			
audiovisual aids	teachers			
public schools	opinions			

17. ABSTRACT (MAX. 250 WORDS) An investigation of three factors expected to affect the use of radio and recordings in the classroom is presented. These are: the availability of certain items of audio equipment; teacher preferences regarding the classroom use of radio broadcasts, tape recordings and disc recordings; and the difficulties experienced in the use of radio in the classroom.

A total of 2,420 postcard questionnaires was distributed to Texas public school teachers of grades one through nine. The percentage of return was 58.6 percent. Two biases were introduced, in that teachers with access to sound equipment and teachers very interested in the use of radio and recordings were more likely to return the questionnaire than those without the availability and without the interest.

Of the respondents, 18.18 percent reported no radio receivers, tape recorders, transcription players, or television receivers available for their classroom use; 81.75 percent reported the availability of either radio or playback equipment or both; and 49.81 percent reported both radios and tape recorders available. Of those who had only one kind of equipment, the greatest number had tape recorders; of those with more than one kind, the most common selection consisted of radio and tape recorder. The greatest number of respondents preferred tape recordings as the means of bringing radio programs to the classroom. Of the reported difficulties in using radio broadcasts, 74.24 percent were difficulties relating to the medium and its use as opposed to difficulties relating to the content and nature of programs.

Some conclusions were that: efforts to provide classroom equipment should be continued and intensified; radio broadcasts and recordings used in combination are a practical means of reaching a large majority of public school classrooms; teachers will be more inclined to use audio programs if they are provided on recordings rather than as radio broadcasts; greater care in scheduling broadcasts will not be enough to sway the preferences of many who prefer recordings to broadcasts; and, in seeking to improve the utilization of audio programs, attention should be focused on the characteristics of radio as a medium of transmitting instructional material to the classroom.

ERIC No.

18. SOURCE OF ABSTRACT

C. FUNDING DATA

19. SUPPORTING ORGANIZATION	20. DIVISION OR DEPT.	21. CONTRACT NO. / PROJECT NO.
	22. TOTAL COST OF PROJECT	
	23. DURATION OF PROJECT	U.S. Department of Health, Education, and Welfare, Office of Education

ERIC Form 1

598

ED002720

598

E.53

A Study of Certain Factors That Influence the Use of Radio Broadcasts and Recordings in Public School Classrooms

by

Gale R. Adkins

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated do not necessarily represent official Office of Education position or policy.

RADIO-TELEVISION RESEARCH
The University of Kansas
Lawrence, Kansas

J0433

A STUDY OF CERTAIN FACTORS THAT INFLUENCE THE USE OF RADIO BROADCASTS AND RECORDINGS IN PUBLIC SCHOOL CLASSROOMS

By

Gale R. Adkins

Chairman
Radio-Television Research Committee

Summer, 1959

R A D I O - T E L E V I S I O N R E S E A R C H

The University of Kansas
Lawrence

ED002720

A STUDY OF CERTAIN FACTORS THAT INFLUENCE THE USE
OF RADIO BROADCASTS AND RECORDINGS IN PUBLIC SCHOOL CLASSROOMS

Table of Contents

		Page
I.	INTRODUCTION AND PURPOSE OF THE STUDY.....	1
II.	THE DATA-GATHERING INSTRUMENT.....	2
III.	THE SAMPLE AND METHOD OF DISTRIBUTION.....	3
IV.	THE RESPONSE FROM THE SAMPLE.....	4
V.	TABULATION OF DATA.....	6
VI.	SUMMARY AND CONCLUSIONS.....	19
VII.	OBSERVATIONS CONCERNING FACTORS THAT MAY INFLUENCE THE CLASSROOM USE OF RADIO AND RECORDINGS.....	23
	APPENDIX.....	31

A STUDY OF CERTAIN FACTORS THAT INFLUENCE THE USE OF RADIO BROADCASTS AND RECORDINGS IN PUBLIC SCHOOL CLASSROOMS

I. INTRODUCTION AND PURPOSE OF THE STUDY

How do teachers feel about using radio broadcasts and sound recordings in the classroom? Extreme differences of preference and practice are known to exist. A recent study conducted at the University of Minnesota revealed that the Minnesota School of the Air reaches a minimum weekly audience of 119,000 children through KUOM, the university radio station.[1] The same study showed that not more than two per cent of the potential audience in any school listened to a tape recording of a Minnesota School of the Air program although tape recordings were available. On the other hand, in 1954 the Texas School of the Air discontinued statewide broadcasts and shifted emphasis to a "tapes for the classroom" approach. A memorandum to teachers and administrators stated, "It is believed that the wealth of classroom instructional materials now available on individual school tape recorders through the new tape-duplicating service (Texas School of the Air and Tapes) will largely supplant the radio broadcasting of curriculum programs for in-school listening."[2] What factors account for such differences in approach and concept? There is an evident need to know more about why some teachers and educators place their faith in radio broadcasts for in-school listening while others prefer tape recordings for classroom use.

The purpose of this study was to investigate three factors which would be expected to affect the use of radio and recordings in the classroom. The first was the availability of certain items of audio equipment; the second was teacher preferences regarding the classroom use of radio broadcasts,

---

1 An Audience Study of KUOM Programs for Schools. Station KUOM, University of Minnesota, 1957. pp. 1-2

2 Memorandum on the Texas School of the Air. Curriculum Development Division, Texas Education Agency, Austin. September, 1954. pp. 1-2

tape recordings, and disc recordings; and the third was the difficulties experienced in the use of radio in the classroom.

It was recognized that these three factors are not the only ones that have a part in determining the nature and extent of classroom use of radio and recordings. The relevancy of other influences is emphasized in a later section of this report. The decision to confine this investigation to the stated areas and to request only a minimum quantity of data was based on two convictions: (1) that the three factors selected for study are among the most influential determinants, and (2) that data from a relatively large sample was essential if results were to be convincing. The instrument was kept brief and simple in an effort to obtain a high percentage of returns.

II. THE DATA-GATHERING INSTRUMENT

The instrument devised was a postcard questionnaire which carried the questions and allowed space for the answers. The respondent was asked to indicate the school and city in which he or she was a teacher, but no signature was requested.

Two forms of the postcard questionnaire were constructed. One form, a single postcard, was to be distributed in teachers' meetings or to be placed in faculty mail boxes. The second form was a double postcard which included the single card plus an attached card bearing a brief explanation and requesting co-operation in the study. The double postcard was used for mailing directly to teachers at their residence addresses. It was believed that the fact that postcard responses were to be returned unsigned through the U. S. Mail would encourage teachers to express themselves freely. Reproductions of the two forms of the instrument are included in the Appendix.

III. THE SAMPLE AND METHOD OF DISTRIBUTION

The sample was composed of Texas public school teachers of grades one through nine. With the exception of those cities served by educational radio or television stations, all Texas cities with populations of 50,000 or over were represented in the sample. Smaller towns were selected to give each section of the state a sample representation that was approximately proportionate to the population.

The procedures of sample selection were calculated to yield a random sample of classroom teachers from all subject matter areas within the grade range and cities chosen. No consideration was given either to the availability of audio materials relating to the different subject areas or to the degree to which audio devices are usually employed in those areas. In selecting the group to be contacted by direct mail, common techniques of regular-interval sampling were applied to lists of teachers and faculty directories supplied by co-operating school systems.

It was believed that in cities having educational stations the conditions of teacher attitude and availability of receiving equipment might be very different from those conditions in cities without educational stations. To eliminate this possibility of sample bias, Abilene, El Paso, and Houston were omitted from the sample because they were being served by educational radio stations.

A total of 2,420 postcard questionnaires was distributed during the winter of 1956 and the spring of 1957. About two-thirds of the postcards were distributed to teachers through school mail delivery or in regular faculty meetings. Arrangements were made with the superintendents of the school systems involved. The double postcards were mailed directly to teachers at their home addresses. Direct mailing was used to cover towns and cities in which centralized distribution seemed to be impractical.

IV. THE RESPONSE FROM THE SAMPLE

At the time of tabulation in the summer of 1957, a total of 1,419 usable postcard questionnaires had been returned. Thus, the percentage of return was 58.6%. This ratio of return is regarded as good for a questionnaire with no follow-up contact.

The questionnaire method may have introduced a sample bias which would have resulted in reports of equipment availability running somewhat higher than was actually the true condition in the schools represented. Teachers who had access to the items of sound equipment mentioned in the questionnaire may have been more inclined to complete and return the postcard than were teachers who did not have such equipment. There is no way of knowing for certain what equipment was available to non-respondents.

Another bias may have affected the reports of preferences and difficulties. The teachers who were most likely to have had well founded and experienced-based preferences were those with the greatest interest in radio and recordings. Those interested teachers may have been more inclined than the less interested ones to return the questionnaire. This selective factor may have caused the expressions of preference and utilization difficulty to reflect somewhat more perception than is typical of the entire population of teachers. However, neither of these possible biases would seem to have had a significant influence on the results of the study.

The number of responses from cities and towns in various population groups is shown in Table 1.

TABLE I

RESPONSES CLASSIFIED ACCORDING TO POPULATION OF CITY OR TOWN

Population of City or Town	Number of Responses	Per Cent of Responses
500 through 20,000	43	3.03
20,001 through 50,000	141	9,93
50,001 through 100,000	604	42.56
100,001 through 300,000	495	34.88
300,001 through 700,000	136	9.58
Total Number of Responses	1,419	

Table I shows the greatest number of responses (604 or 42.56%) to have come from cities in the 50,001 through 100,000 population bracket. The next largest number of responses (495 or 34.88%) came from cities in the 100,001 through 300,000 population group. Towns and cities in the 500 through 20,000 population bracket produced the smallest representation. The figures in Table I suggest that the results of the study are most likely to be representative of conditicns in cities of from 50,001 through 300,000 population.

V. TABULATION OF DATA

THE FIRST QUESTION on the postcard was, "Do you have available for use in your classroom: a radio; a tape recorder; a transcription player; a television set?" Answers were to be indicated with checkmarks.

Many teachers had more than one item of equipment accessible for their use. Table II shows the selections or combinations of equipment reported available.

TABLE II

SELECTIONS OF EQUIPMENT REPORTED AVAILABLE FOR USE IN THE CLASSROOM

Kind of Equipment	Number of Teachers Reporting Availability	Per Cent of the Sample (Based on 1419 Response)
None	258	18.18
Radio receiver only	84	5.91
Tape Recorder only	183	12.89
Transcription player only	29	2.04
Television receiver only	1	.07
Radio receiver and tape recorder	354	24.94
Radio receiver and transcription player	31	2.18
Radio receiver and television receiver	16	1.12
Tape recorder and transcription player	92	6.48
Tape recorder and television receiver	15	1.05
Transcription player and television receiver	0	0
Radio receiver, tape recorder and transcription player	299	21.07
Radio receiver, transcription player and television receiver	1	.07
Tape recorder, transcription player and television receiver	2	.14
Radio receiver, tape recorder and television receiver	27	1.90
Radio receiver, tape recorder, transcription player, and television receiver	27	1.90
Total Number of Teachers Reporting	1,419	

Table II reports the availability of the several selections or combinations of equipment. Of the 1,419 teachers, 18.18% indicated that none of the items of equipment with which this study was concerned was available for their classroom use. Of the teachers who reported having only one of the four items of equipment, the greatest number (183 or 12.89% of the respondents) had tape recorders. Of those who had two of the items of equipment available, the greatest number (354 or 24.94% of the respondents) had a radio receiver and a tape recorder. Of those who had three items of equipment available, the greatest number (299 or 21.07%) had a radio, a tape recorder and a transcription player. Only 27 (1.90%) of the 1,419 teachers had access to all four types of equipment.

It is evident from Table II that 81.75% of the sample group could be reached either by radio broadcasts or by recordings of radio broadcasts. Only those with no equipment (258 or 18.18%) and those with television receivers only (1 or .07%) could not be so reached. Then, after recognizing that 2.04% of the group had transcription players only, it becomes apparent that 79.71% of the teachers had either radios or tape recorders available. A total of 49.81% had both radios and tape recorders.

The majority of teachers reported access to more than one kind of audio equipment. Table III shows the number of teachers who indicated having available equipment selections of various sizes. This table is meant to present another view of how many teachers had choices in the kind of equipment (radio receiver, tape recorder, transcription player, television receiver) that could be used.

TABLE III

FREQUENCY WITH WHICH EQUIPMENT SELECTIONS OF VARIOUS SIZES WERE REPORTED TO BE AVAILABLE

Number of Kinds of Equipment	Number of Teachers Reporting Availability	Per Cent of the Sample (Based on 1419 Responses)
None	258	18.18
One kind of equipment	297	20.93
Two kinds of equipment	508	35.79
Three kinds of equipment	329	23.18
Four kinds of equipment[1]	27	1.90

[1]Radio receiver, tape recorder, transcription player, and television receiver.

An examination of Table III will reveal that 81.82% of the 1,419 teachers had available some kind of equipment for the reception or reproduction of broadcasts. Approximately one teacher out of five had no equipment, and one teacher out of five had one kind of equipment. Some choice of equipment was possible for the 864 (60.87%) of the teachers who had access to more than one kind of equipment. The largest single group (35.79%) was made up of those who had two items of equipment at their disposal.

Among the most significant statistics concerning equipment availability are those that reveal how many teachers had access to each of the four kinds of equipment. Table IV indicates the totals.

TABLE IV

TOTALS OF EQUIPMENT REPORTED AVAILABLE FOR USE IN THE CLASSROOM

Kind of Equipment	Number of Teachers Reporting Availability	Per Cent of the Sample (Based on 1419 Responses)
Radio receiver	839	59.12
Tape recorder	999	70.40
Transcription player	481	33.89
Television receiver	89	6.26

Table IV shows how many teachers in the sample of 1,419 reported the availability of each of the four kinds of equipment. Tape recorders were available to the greatest number of teachers (999 or 70.40% of the respondents). Radio receivers were accessible to 59.12% (839) of the teachers. Transcription players were available to 33.89% of the respondents. Only 6.26% of the teachers reported television receivers available for use in the classroom.

THE SECOND QUESTION was: "If you had the necessary equipment, would you prefer having radio programs made available over a radio in your classroom; on tape recordings in your classroom; or on disc recordings in your classroom?" The respondent was requested to indicate preference with a checkmark and to check only one item. The responses to the question are reported in Table V.

TABLE V

PREFERENCE AS TO MEDIUM USED IN BRINGING RADIO PROGRAMS TO THE CLASSROOM

Medium Preferred	Number of Teachers Expressing Preference	Per Cent of the Sample (Based on 1403 Responses)
Radio	282	20.09
Tape recordings	581	41.41
Records or Transcriptions	540	38.48
Total Number of Responses	1,403	

Table V shows that the greatest number of teachers (581 or 41.41% of the 1,403 who answered the question) indicated a preference for tape recordings. Records or transcriptions were preferred by 38.48% of the group. Radio was the choice of 20.09% of the respondents.

It is evident from this data that the majority of respondents favored recordings over radio for classroom use. More than twice as many teachers marked tape preference as marked radio. Nearly 80% indicated one or the other type of recording as preferred to radio. It should be recognized that availability of equipment was not a factor in the preference expressed in answer to this question.

THE THIRD QUESTION was presented as follows: "What have you found to be the greatest difficulty in using radio broadcasts as instructional materials?" Space was provided on the postcard for a write-in answer. The responses to this question are reported in Table VI.

TABLE VI

REPORTED DIFFICULTIES IN USING RADIO BROADCASTS AS INSTRUCTIONAL MATERIALS

Difficulty	Number of Teachers Reporting	Per Cent of the Sample (Based on 1287 Responses)
1. Broadcast of programs at inconvenient times	494	38.38
2. Inability to "preview", stop and resume, or re-run programs	190	14.76
3. Cannot get programs which are suitable for the grade level	115	8.93
4. Cannot get programs which are suitable for the subject area	91	7.07
5. Unsatisfactory radio reception	82	6.37
6. Difficulty in obtaining a radio	66	5.12
7. Programs do not fit units currently being studied	62	4.81
8. Lack of informational material about programs to be used	42	3.26
9. Programs do not hold students' interest and attention	34	2.64
10. Not enough time in the day to permit use of radio	33	2.56
11. Lack of advance information about broadcasts to be available	30	2.33
12. Poorly produced programs	13	1.01
13. Station changing scheduled time of programs	7	.54
14. Material presented too fast for slow children	6	.46
15. Speech too difficult to understand	5	.38
16. If volume high enough to hear, disturbs other classes	4	.31
17. Interruptions during listening	3	.23
18. Programs not effective as teaching material	3	.23

TABLE VI (Continued)

REPORTED DIFFICULTIES IN USING RADIO BROADCASTS AS INSTRUCTIONAL MATERIALS

Difficulty	Number of Teachers Reporting	Per Cent of the Sample (Based on 1287 Responses)
19. Advertising or adjacent programs objectionable	3	.23
20. Material not always accurate	2	.15
21. Principal does not favor use of radio	2	.15
Total Number of Responses	1,287	

Table VI shows that the largest number of teachers (494 or 38.38%) reported inconvenience of broadcast time to be the greatest difficulty in using radio broadcasts as instructional materials. Inability to preview, stop and resume, or re-run broadcasts was the chief difficulty reported by 14.76% (190) of the 1,287 teachers who answered the question. Inability to obtain broadcasts which are suitable for the grade level was named by 8.93% of the group. Inability to obtain broadcasts which are suitable for the subject area was mentioned by 7.07% of the teachers. Inability to obtain suitable broadcasts was, therefore, a difficulty reported by 16.0% of the sample. The tabulation of difficulties shows a pronounced bunching of cases at the top of the list and a wide range of frequency. Only three of the twenty-one different difficulties reported were mentioned by as many as ten per cent of the respondents.

It may be observed that the reported difficulties tend to fall into two classifications: (1) those relating to radio as a medium and its use, and (2) those relating to the content and nature of programs. To assist in understanding the difficulties experienced by teachers the list was divided into sub-groups of these two classifications. Tables VII and VIII show the results of this division.

TABLE VII

REPORTED DIFFICULTIES IN USING RADIO BROADCASTS AS INSTRUCTIONAL MATERIALS: DIFFICULTIES RELATING TO THE MEDIUM AND ITS USE

Difficulty	Number of Teachers Reporting	Per Cent of the Sample (Based on 1287 Responses)[1]
1. Broadcast of programs at inconvenient times	494	38.38
2. Inability to preview, stop and resume, or re-run programs	190	14.76
3. Unsatisfactory radio reception	82	6.37
4. Difficulty in obtaining a radio	66	5.12
5. Lack of informational material about programs to be used	42	3.26
6. Not enough time in the day to permit use of radio	33	2.56
7. Lack of advance information about broadcasts to be available	30	2.33
8. Station changing scheduled time of programs	7	.54
9. If volume high enough to hear, disturbs other classes	4	.31
10. Interruptions during listening	3	.23
11. Advertising or adjacent programs objectionable	3	.23
12. Principal does not favor use of radio	2	.15
Total Number of Teachers Reporting 956		Total 74.24

[1]Percentages are based on the 1,287 responses to question three.

Table VII shows that according to this data 74.24% (956) of the difficulties experienced by teachers in using radio broadcasts as instructional materials were difficulties relating to the medium and its use. The two difficulties most often reported by teachers (inconvenient broadcast time and inability to preview, stop, and re-run) were of this classification.

It may be noticed that two difficulties refer to lack of information. These were treated as separate items because of a clear differentiation in area. "Information about programs to be used" (Difficulty No. 5, Table VII) refers to information about program content, activities to be performed while listening, stories and songs to be featured, vocabulary, etc. This kind of detailed information would usually be provided by series manuals or teacher guide sheets. "Information about broadcasts to be available" (Difficulty No. 7, Table VII) refers to announcement and schedule information of the kind that might be obtained from program schedules, series brochures, announcement sheets, or news releases.

Since 18.18% of the 1,419 respondents reported no equipment available (Table II), it might be expected that the same per cent would indicate equipment availability to be the greatest difficulty. However, Table VII shows that in answer to question three only 5.12% of the respondents cited the difficulty of obtaining a radio. Some of the remaining 13.06% of the respondents may not have answered question three (132 did not supply answers); others may not have considered the problem of equipment availability to be relevant to question three; and still others may have felt equipment access to be relevant but less significant than other difficulties.

Table VIII shows the frequency of reported difficulties relating to the content and nature of broadcasts.

TABLE VIII

REPORTED DIFFICULTIES IN USING RADIO BROADCASTS AS INSTRUCTIONAL MATERIALS: DIFFICULTIES RELATING TO THE PROGRAM ITSELF

Difficulty	Number of Teachers Reporting	Per Cent of the Sample (Based on 1287 Responses)[1]
1. Cannot get programs which are suitable for the grade level	115	8.93
2. Cannot get programs which are suitable for the subject area	91	7.07
3. Programs do not fit units currently being studied	62	4.81
4. Programs do not hold students' interest and attention	34	2.64
5. Poorly produced programs	13	1.01
6. Material presented too fast for slow children	6	.46
7. Speech too difficult to understand	5	.38
8. Programs not effective as teaching material	3	.23
9. Material not always accurate	2	.15
Total Number of Teachers Reporting	331	Total 25.68

[1]Percentages are based on the 1,287 responses to question three.

Table VIII indicates that 25.68% (331) of the teachers who answered question three reported their greatest difficulties to be those having to do with the program itself--its nature and content. The greatest number (115 or 8.93%) cited the problem of obtaining programs which are suitable for the grade level, and a somewhat smaller group (91 or 7.07%) specified the problem of obtaining program suitable for the subject area.

The majority of the difficulties relating to the broadcast itself seem to be matters of program availability and effective planning as opposed to faults of writing or production. If the difficulties included in Table VIII under Numbers 1,2,3, and 8 are regarded as aspects of program availability and effective planning, and the items under Numbers 4,5,6,7, and 9 are regarded as faults of writing and production, then 81.87% of these difficulties fall in the area of program availability and program planning.

This study has attempted to determine facts concerning the availability of certain items of broadcast receiving and recording playback equipment; the pattern of teacher preferences concerning the use of certain types of audio materials; and the pattern of difficulties experienced in using radio in the classroom. Each question brought forth data which produced an answer profile with one or more salient features. Such results encourage the formation of conclusions. The following section provides a concise summary of findings and a group of conclusions based on the study results.

VI. SUMMARY AND CONCLUSIONS

SUMMARY

The following results, presented here in brief summary, seem particularly significant:

A. 18.18% of the respondents reported no radio receivers, tape recorders, transcription players, or television receivers available for their classroom use (Table II).

B. 81.75% reported the availability of either radio or playback equipment or both (Table II).

C. 49.81% reported both radios and tape recorders available (Table II).

D. Of those teachers who had available more than one kind of equipment referred to in this study, the most common selection consisted of radio and tape recorder (Table II).

E. Of those teachers who had available only one kind of equipment, the greatest number had tape recorders (Table II).

F. The greatest number of respondents (70.40%) reported tape recorders available (Table IV).

59.12% reported radio receivers available.

33.89% reported transcription players available.

6.26% reported television receivers available.

G. The greatest number of respondents (41.41%) preferred tape recordings as the means of bringing radio programs to the classroom (Table V).

38.48% preferred disc recordings.

20.09% preferred radio broadcasts.

H. The greatest number of respondents (38.38%) reported inconvenient broadcast time to be the greatest difficulty in using radio broadcasts as instructional materials (Table VI).

14.76% reported the inability to preview, stop and resume, and re-run radio broadcasts to be the greatest difficulty.

SUMMARY (continued)

H.(con't) 16.0% reported certain difficulties in obtaining suitable broadcasts.

I. 74.24% of the reported difficulties in using radio broadcasts were difficulties relating to the medium and its use as opposed to difficulties relating to the content and nature of programs (Table VII).

CONCLUSIONS

1. If public schools are to use to full advantage the educational materials available on recordings and through radio and television broadcast, efforts to provide equipment for the classroom must be continued and intensified. More than 18% of the teachers who co-operated in this study had no kind of broadcast receiver or recording playback equipment available. Nearly half of the teachers had no radios available, and only three teachers out of fifty had television receivers available for classroom use. It should be remembered that acquisition of equipment in the communities included in this survey had never been stimulated by service offered by educational stations.

2. Radio broadcasts and recordings used in combination are a practical means of reaching a large majority of public school classrooms. Nearly 82% of the responding teachers had access to the equipment needed to use broadcasts, recordings or both. Offering audio programs by radio alone or by recordings alone results in the loss of a sizable percentage of potential users who have only the "other" kind of equipment.

CONCLUSIONS (continued)

3. When only one method of distribution is to be employed, audio program materials for the classroom can be used by the largest number of teachers if the programs are made available on tape recordings. More than 70% of the teachers reported tape recorders available, whereas smaller numbers reported other equipment.

4. Regardless of equipment availability, teachers will be more inclined to use audio programs if those programs are provided on recordings rather than offered as radio broadcasts. Nearly 80% of the respondents indicated that they preferred recordings to radio in the classroom. The reader is again cautioned to remember that this preference was found to exist in communities which were not served by educational stations.

5. The placement of in-school broadcasts on station schedules should be decided only after the completion of all possible efforts to determine the needs and preferences of teachers. Inconvenient broadcast time headed the list of difficulties experienced in the use of radio broadcasts as instructional materials.

6. Greater care in scheduling broadcasts will not be sufficient to sway the preferences of many who prefer recordings to broadcasts. Whereas 1,121 teachers expressed preference for recordings, only 494 cited inconvenient broadcast time as the greatest difficulty. The predominant preference for recordings (79.89%) would seem to stem from the fact that the use of recordings can eliminate or reduce not only scheduling inconveniences but also a great many of the other difficulties reported for radio--inability to preview or stop and re-run programs, reception troubles, difficulties in obtaining a radio, etc.

7. If education is to realize maximum service from radio, increased effort must be devoted to making available broadcasts which are suitable for teaching purposes. In the data gathered for this study the total number of comments about the scarcity of suitable programs would rank second in the list of difficulties experienced. Radio programs should be more carefully planned to fit the interests, needs, and developmental level of the different grade and age groups.

8. More effort should be devoted to providing teachers with information about educational broadcasts. Information should not only be made available, but should also be presented and distributed in such manner that teachers will be aware of the information and will find it convenient and attractive. In this study more teachers complained about lack of broadcast schedule and content information than complained about difficulty in obtaining a radio.

9. In seeking to increase and improve the utilization of audio programs, searching attention should be focussed on the characteristics of radio as a medium of transmitting instructional material to the classroom. In this study, 74% of the reported difficulties in using radio broadcasts were difficulties relating to the medium and its use. Some of the conditions that discourage or weaken utilization are inherent in the medium of radio. However, many negative factors can be eliminated or alleviated by remedial measures--as, for instance, the rebroadcast of programs can alleviate schedule inconveniences and the employment of FM can minimize reception difficulties.

VII. OBSERVATIONS CONCERNING FACTORS THAT MAY INFLUENCE THE CLASSROOM USE OF RADIO AND RECORDINGS

The results of this study will be most provocative if they are considered in the light of factors that may have been instrumental in bringing about the existing attitudes, parctices, and conditions. It is obvious that a teacher's choice of instructional tools and the inclination to use them may be colored by a great number of facts and predispositions. The factors that in general experience, have appeared to be most commonly involved and most influential have been summarized here in an attempt to provide a realistic perspective of causal relationships. Changes in teacher's viewpoints and practices will come about as a result of deliberate efforts or chance developments which shift the balance of these and similar factors. A thoughtful examination of these factors may yield productive ideas for improving utilization and repairing weaknesses in directions suggested by the results of this investigation.

Teacher attitudes and practices regarding the use of radio broadcasts and sound recordings in the classroom may be influenced by the following factors:

1. Development of Educational Television.

The growth of television, one of the newest and most promising educational tools, has in many instances drawn primary attention away from radio and recordings. Educators have quite properly been trying to ascertain the appropriate place of television in the educational environment. Sometimes this concern has become a preoccupation resulting in the neglect of purely audio materials. With educational television appearing ever larger on the horizon, some teachers and administrators have been too much inclined to dismiss the advantages, economies, and potential of radio and sound recordings.

In some cases, however, the spirited interest in television has served to awaken a renewed interest in radio, recordings, and film.

1. (con't) The general result in such instances has often been improvement in audio-visual facilities and increase in utilization.

2. Service Available from Broadcasting Stations.

If an educational television station in the community supplies instructional programs, the need and the recognition of need for radio programs and recordings for use in the classroom may be reduced. ETV programs may truly satisfy needs which have been served or could be served by radio programs or recordings. The focus of attention and effort on television programs may, however, tend to obscure opportunities for the employment of other media.

When an educational radio station serves the community, the need for recordings to be used in the classroom may be reduced if: (1) programs that meet classroom needs are broadcast, (2) programs are scheduled at times convenient for the teachers, (3) schedule conflicts are resolved through the use of repeat broadcasts, (4) advance information regarding the broadcasts is made conveniently available, (5) suitable receiving equipment is available, and (6) reception is good.

To the extent that commercial broadcasting stations schedule educational programs and meet the conditions outlined in the paragraph above, the demand for recordings may be reduced. Cancellation of broadcasts and change of air time are among the leading complaints voiced by teachers in criticism of school broadcasts on commerical stations.

Educational stations are the principal production source of both live and recorded programs for instructional purposes. In general, educational stations are more likely than other organizations to have the time, human resources, and equipment required for the planning

2. (con't) and production of programs for teaching. The significance that public school teachers attach to radio and recordings for the classroom is closely related, therefore, to the content, quality, variety and number of instructional broadcasts produced by educational stations. This may be a responsibility for which some educational stations feel they did not ask, but it is a reality that cannot be ignored.

3. Availability of Good Receiving and Playback Equipment.

Audio-visual equipment in the public schools seems to be increasing gradually in amount, variety, and quality. Some of the greatest increases and improvements seem to have been in relation to sound recording equipment. Tape recorders and transcription players in the price range usually purchased by schools have been substantially improved. Machines are smaller and lighter, fidelity of sound reproduction has been improved and operating controls have been simplified. It is reasonable to believe that teacher interest and utilization tend eventually to increase as the quantity ond quality of equipment increases.

A teacher's enthusiasm for using radio or recordings is likely to be cooled if equipment is not conveniently available. Troublesome checkout procedures, an inadequate supply of machines, or difficulty in moving heavy equipment are among the discouraging conditions.

All audio-visual equipment should be kept in perfect operating condition. When teachers feel that radios or playback machines are likely not to be operating properly, they are inclined to eliminate the problem by not using the equipment. Prejudice against a teaching tool can stem from experiences with faulty equipment.

Radios, tape recorders and transcription players should be selected

3. (con't) on the basis of comparative tests. Quality of sound reproduction and ease of operation are prime considerations. If operating controls are too complicated, some teachers will learn only to make the equipment function but will not be able to obtain optimum performance.

4. Availability of Useful Recordings.

Enthusiasm for the use of recordings in the classroom will depend in part on whether or not recorded programs of suitable content and quality are easily available. Many audio-visual departments and instructional materials centers at the state, public school, and college levels have established tape libraries. Educational series which in years past could be heard only as radio broadcasts are now frequently available on tape. Many distribution and production centers which had previously depended entirely on broadcast outlets for reaching the classroom are turning more and more to tape. Since 1954 DAVI has operated a National Tape Recording Repository at Kent State University. Through this service teachers can conveniently obtain tape recordings of high quality programs which have been carefully planned and produced for instructional use.

The procurement and scheduling of appropriate recordings sometimes presents problems for both the teacher and the audio-visual center. Descriptive listings may fail to provide all the details needed when making a careful selection of new materials. In addition to fitting the curriculum in terms of subject matter, programs must be appropriate to the conceptual development and vocabulary level of the students. It is often difficult for a teacher to know very far in advance exactly when a recording will be needed. A carefully selected library, accurate and informative lists, and a flexible and convenient system for obtaining recordings will do much to encourage use.

5. Availability of Information and Supplementary Aids.

The extent to which radio broadcasts and recordings are used will be affected by the program information and related materials provided for teachers. The comment is often heard, "I would have used that series if I had known about it in time." Schedules and descriptions of programs must come to the attention of teachers far enough in advance to permit long-range planning. Manuals, outlines, brochures, and posters can do much to interest teachers and to suggest ways in which programs can further course objectives.

6. Time Required for Preparation.

One of the reasons commonly given for not using audio programs is that time does not permit it. Procedures such as ordering tapes, procurement and return of equipment, auditioning programs, and studying manuals are obviously timeconsuming. Teachers must feel that the results justify the additional work. If radio programs and recordings are thoughtfully integrated into the course of study, the time needed for preparation will seem less like extra duty.

7. Skill in Using Radio and Recordings.

Teachers will employ audio materials more often if they have confidence in their knowledge of utilization procedures. Limitations as well as appropriate uses should be understood. A good program used at the wrong time or in the wrong way is more than likely to yield unsatisfactory results.

The teacher's attitude toward the use of radio or recordings in the classroom will depend to a great extent on whether her students are bored, bothered, or enthused by the experience. The reaction of the students is strongly influenced by the teacher's apparent interest in the program as well as by her skill in using the listening experience as a fresh and evident contribution toward the realization of accepted

7. (con't) goals. The development of teaching skills that lead to the most effective use of radio programs is achieved only through considerable investment in thought and practice.

8. Conditions for Listening.

Radio programs and recordings are usually most effective when heard by the students in their regular classroom. Independent receivers or playback units are usually preferred. When programs are fed to the classroom from a central source, scheduling and operational complications often occur. Central sound systems are frequently not designed for high quality sound transmission. If the radio or playback unit is poorly placed in the room, hearing may be difficult in some seating areas. Rooms with poor sound insulation may encourage volume adjustment that is too low for hearing comfort. If listening conditions are unsatisfactory for any reason, the popularity of audio materials will suffer.

9. Control Over Audio Materials.

Some teachers favor recordings in preference to radio because the playback is completely under the control of the teacher. The recording can be auditioned before use with the class, and plans can be laid for appropriate integration of the program with other course materials and activities. When the teacher feels that the proper time has arrived for the listening experience, the program can begin. The problems of inflexible broadcast schedules and quality of radio reception do not exist. A replay of the program or any part is immediately possible.

10. Attitude of Supervision.

The use of radio programs and recordings in teaching will seldom occur on a large scale unless actively encouraged by supervision. Some degree of out-of-class preparation by the teacher is normally required, and the investment of class time must be justified. This is not the path of least resistance. Quite naturally teachers feel that anything more than the exploratory use of new kinds of materials should be acceptable to their supervisors. If a principal or supervisor appears to be in any way unfriendly to the use of certain audio materials, teachers are not likely to insist.

Differences of opinion as to which audio devices are most effective become serious only when one person attempts unwisely to pressure others into acting according to his convictions. The use of radio and recordings for appropriate purposes should receive from supervision the same open-minded encouragement and assistance that should be offered in the use of other modern teaching materials and procedures.

11. Evidence of Value.

Can radio broadcasts or sound recordings serve more effectively than other materials in accomplishing certain educational purposes? Is the use of radio programs in the classroom a waste of time, or would other procedures accomplish more? These questions are still unanswered in the minds of many teachers. Educational radio has endured and developed throughout the years because great numbers of teachers and educators have been convinced by experience that radio programs are useful teaching materials. Nevertheless, there is a scarcity of formal research results which define the comparative effectiveness of radio programs as instructional materials.

11. (con't) When the need for significant decisions concerning educational television became pressing, a great call went out for research evidence concerning the instructional value of television. Investigations soon produced evidence to show the instructional potential of TV. Educational radio, the product of a more leisurely evolution, has never enjoyed a similar concentration of research forces on the investigation and development of teaching effectiveness. Radio programs and recordings as classroom materials would be freed for wider and more enthusiastic use if specific research results defining the values of those materials could be brought to general attention. If audio programs are to serve to their fullest capacity, teachers must be satisfied either by their own experience and observation or by valid and meaningful research evidence that radio and recordings can do a useful job in the classroom.

APPENDIX

Dear Teacher:

How can educational broadcasts and recordings serve the teacher best? Audio-visual departments and teaching materials centers want to know. To help improve these services we need answers to two or three short basic questions. It will take less than a minute of your time.

Your response will be appreciated.

Yours Very truly,

Gale R. Adkins
Director of Radio-TV
Research

The Double Postcard Form

Do you have available for use in your classroom:

a radio? YES____ NO____
a tape recorder? YES____ NO____
a transcription player? YES____ NO____
a television receiver? YES____ NO____

If you had the necessary equipment, would you prefer having radio programs to be used in teaching made available:

(CHECK YOUR PREFERENCE) (CHECK ONLY ONE)

(1) over a radio in your classroom_____; OR
(2) on tape recordings in your classroom_____;OR
(3) on disc recordings in your classroom_____.

What have you found to be the greatest difficulty in using radio broadcasts as instructional materials?_____

_____

_____

_____

SCHOOL_____CITY_____

Do you have available for use in your classroom:

a radio?	YES____	NO_____
a tape recorder?	YES____	NO_____
a transcription player?	YES____	NO_____
a television receiver?	YES____	NO_____

If you had the necessary equipment, would you prefer having radio programs to be used in teaching made available:

(CHECK YOUR PREFERENCE) (CHECK ONLY ONE)

(1) over a radio in your classroom_____;OR
(2) on tape recordings in your classroom_____;OR
(3) on disc recordings in your classroom_____.

What have you found to be the greatest difficulty in using radio broadcasts as instructional materials?_____

_____

_____

_____

SCHOOL_____CITY_____

The Single Postcard Form